

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons which follow.

Claims 1-30 were filed in the present application. Claims 1-30 were rejected by the Examiner. Claims 20 and 27 have been amended. Applicants respectfully traverse the rejection of Claims 1-30. Accordingly, Claims 1-30 are now pending in this application.

In Paragraph 1 of the Office Action, the Examiner noted that "Prior art described in 'Background of the Invention' section of the present application" has not been considered. Applicants have noted the Examiner's comment and will submit a listing in a separate paper in accordance with 37 C.F.R. §1.98(b) for any references to be considered.

In Paragraph 2 of the Office Action, the Examiner rejected Claims 20 and 27-30 under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as their invention. Claims 20 and 27 have been amended to correct the indefiniteness. Accordingly, reconsideration and withdrawal of the rejection of Claims 20 and 27-30 under 35 U.S.C. §112 is respectfully requested.

In Paragraph 4 of the Office Action, the Examiner rejected Claims 1-3, 7, 9, 11-13, 16, 17, 21, 23, and 25-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,333,617 to Hafner (hereinafter Hafner) in view of U.S. Patent No. 3,631,851 to Hesen (hereinafter Hesen).

Independent Claim 1 recites an "impedance detector" and "a dynamic impedance matching circuit." Independent Claim 12 recites an "a circuit that monitors and impedance" and "a dynamic impedance matching circuit." Independent Claim 27 recites "a dynamic impedance matching circuit."

In Paragraph 4 of the Office Action, the Examiner stated that “[t]he first input stage is read as the impedance detector (c 4, ll 44-62).” Applicants respectfully disagree. Hafner fails to teach or suggest an impedance detector.

Hafner refers first to unity gain buffer amplifiers connected to the patient leads. (Hafner, col. 4, lines 45-46) A unity gain buffer amplifier is an amplifier used to draw more current than a voltage source can deliver when the source has a high internal impedance. Although a unity gain buffer amplifier may be used to compensate for a high internal impedance, it is not an impedance detector. Accordingly, Hafner does not teach or suggest an impedance detector in referring to unity gain buffer amplifiers.

Also in the section cited by the Examiner, Hafner refers second to resistors configured to “cause the first stage outputs RABUF and LLBUF to move to + 1.6 V and the outputs LABUF and VBUF to move to – 1.6 V in the event there is a failure in the respective patient lead wires.” (Hafner, Col. 4, Lines 52-56) Compensating for a failure in a lead wire is not detecting impedance. Accordingly, Hafner does not teach or suggest an impedance detector in referring to compensating for a failure in a lead wire.

In paragraph 4 of the Office Action, the Examiner further states that “[t]he microprocessor (15) controls the final pacemaker stage and the final ECG stage, read to contain dynamic impedance matching circuits.” Applicants respectfully disagree. Hafner fails to teach or suggest dynamic impedance matching circuits.

Hafner teaches a final pacemaker stage in which “differential signals DIF1, DIF2, and DIF3 are passed through a high pass filter, amplified, halfwave rectified, ass and the resulting signal stretched ...” (Hafner, Col. 3, lines 61-63) Further, Hafner teaches a final ECG stage in which “differential signals are then passed through a high pass filter, amplified, passed through a low pass filter to the input of the analog to digital converter.” (Hafner, Col. 4, lines 1-4) However, these functions are not impedance matching circuits. As described above, impedance is not detected in Hafner. An impedance cannot be matched because it is never detected. Accordingly, Hafner does not teach or suggest a dynamic impedance matching circuit coupled to an antenna.

Hesen also fails to teach or suggest either detecting impedance or a dynamic impedance matching circuits. Thus, Hesen fails to provide for the deficiencies noted above in Hafner. Accordingly, reconsideration and withdrawal of the rejection of independent Claims 1, 12 and 27 is respectfully requested.

Claims 2-11 depend from Claim 1 and include all of the limitations thereof. Claims 13-26 depend from Claim 12 and include all of the limitations thereof. Claims 28-30 depend from Claim 27 and include all of the limitations thereof. It is respectfully submitted that these claims are allowable for at least the same reasons as are independent Claims 1, 12 and 27. Accordingly, reconsideration and withdrawal of the rejection of Claims 2-11, 13-26, and 28-30 is respectfully requested.

In Paragraph 5 of the Office Action, Claims 4, 8, 10, 18, 22 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hafner in view of Hesen in further view of U.S. Patent No. 5,748,103 to Flach et al. (hereinafter Flach et al.). However, Claims 4, 8, 10, 18, 22 and 24 are dependent from the independent Claims 1 and 12. As discussed above, Claims 1 and 12 are believed to be patentable over Hafner in view of Hesen. Flach et al. does not provide for the deficiencies noted above because Flach et al. does not teach or suggest detecting impedance or a dynamic impedance matching circuits. Accordingly, reconsideration and withdrawal of the rejection of Claims 4, 8, 10, 18, 22 and 24 is respectfully requested.

In Paragraph 6 of the Office Action, Claims 5, 6, 19, 20 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hafner in view of Hesen in further view of modified Hafner. However, Claims 5, 6, 19, 20 and 30 are dependent from the independent Claims 1, 12, and 27. As discussed above, Claims 1, 12, and 27 are believed to be patentable over Hafner in view of Hesen. Modified Hafner does not provide for the deficiencies noted above because modified Hafner does not teach or suggest detecting impedance or a dynamic impedance matching circuits. Accordingly, reconsideration and withdrawal of the rejection of Claims 5, 6, 19, 20 and 30 is respectfully requested.

In Paragraph 7 of the Office Action, Claims 14, 15, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hafner in view of Hesen in further view

